

### ABSTRACT OF THE DISCLOSURE

[0053]

A vacuum control system controls the amount of time that pressure is applied to a breast and the amount of time no pressure is applied to the breast, independent of the vacuum level. The amount of time that pressure is applied to a breast and the amount of vacuum applied to the breast cups can be varied by the user. A disposable biological filter isolates the pump from the breast cups. The biological filter is packaged in a housing that has an O-ring push-in connector to connect the collection system to the pump. The vacuum applied to the breast cups is monitored. The control system maintains the vacuum at a level set by the user. A second higher level is used as a safety threshold. The control system shuts down the pump when this higher level is sensed. The breast cup is constructed to provide a controlled collapse when vacuum is applied to mimic the suckling of an infant.